



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,474	02/04/2004	Jin-Soo Park	678-558 CON (P9609 CON)	2838
28249 7590 09/12/2007 DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. SUITE 702 UNIONDALE, NY 11553			EXAMINER SAFAIPOUR, BOBBAK	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 09/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/771,474

Applicant(s)

PARK ET AL.

Examiner

Bobbak Safaipour

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Terminal Disclaimer

The Terminal Disclaimer submitted on 6/14/2007 has been acknowledged by the Examiner and made of record in the application file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Li et al. (US 6,590,873 B1; hereinafter Li)** in view of **Lin et al. (US 6,249,894; hereinafter Lin)**.

Consider **claim 1**, Li discloses a method of reporting reception states of a reverse link comprising a plurality of channels, wherein the pilot and power control bits are transmitted over 20 ms time intervals (col. 3, lines 12-25) from a base station in a mobile station, comprising the steps of: allocating bits indicating the reception states of a reverse frame (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control); and transmitting the reverse frame (col. 3, lines 11-65).

Li fails to specifically disclose reception states of first information received on a first traffic channel and second information received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis.

In related Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Consider **claim 6**, Li discloses a method of controlling transmission power of traffic channels in a base station which transmits pilot and power control bits are transmitted in a reverse link over 20 ms time intervals (col. 3, lines 12-25) to a mobile station, comprising the steps of: receiving a reverse frame (col. 3, lines 11-65); separating the reception state indicating bits from the reverse frame (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control), and performing a power control on traffic channels (col. 3, lines 11-65), wherein the reception state are reception result indicator bits for power control on a frame basis (col. 3, lines 11-65).

Li fails to specifically disclose reception states of first information received on a first traffic channel and second information received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis.

In related Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Consider **claim 2**, and as **applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are alternatively allocated. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 3**, and as **applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 4**, and as **applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs (Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 5**, and as **applied to claim 1 above**, Li, as modified by Lin, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention

Art Unit: 2618

was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 7**, and as **applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are alternatively allocated. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 8**, and as **applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 9**, and as **applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs (Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 10**, and as **applied to claim 6 above**, Li, as modified by Lin, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Li et al.** (US 6,590,873 B1; hereinafter **Li**) in view of **Lin et al.** (US 6,249,894; hereinafter **Lin**) and in further view of **Kwon et al.** (US 6,151,328; hereinafter **Kwon**)

Consider **claim 11**, Li discloses a mobile station for receiving information from a base station (figure 1; col. 2, line 66 to col. 3 line 11; forward link) and reporting reception results information to the base station (figure 1; col. 2, line 66 to col. 3 line 11), comprising: indicating bits of the information (col. 3, lines 11-65); allocating the reception state indicating bits in slots of a reverse frame, each slot having one reception state indicating bit (col. 3, lines 11-65; each frame of the reverse pilot channel comprises sixteen 1.25 ms power control sub-frames over which a power control group is transmitted, wherein each pilot control group comprises four bits representing a pilot and power control).

Li fails to specifically disclose a first MUX for multiplexing reception state indicating bits of the first and the second information; and a second MUX for sequentially allocating the multiplexed the reception state indicating bits of the first and the second information.

In related art, Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second

information are reception result indicator bits for power control on a frame basis: (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Furthermore, in related art, Kwon discloses first and second multiplexers. (col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwon into the teachings of Li and Lin to control power in a CDMA system which is capable of performing a power control operating in consideration of different environments.

Consider **claim 17**, Li discloses a base station for transmitting to a mobile station and receiving the reception results of the information from the mobile station (figure 1; col. 3, lines 11-65; reverse link), comprising: receiving a reverse frame including a plurality of slots and for separating reception state indicating bits from the reverse frame (figure 1; col. 3, lines 11-65; reverse link).

Li fails to specifically disclose a first demultiplexer (DEMUX) for receiving a reverse frame including a plurality of slots and for separating reception state indicating bits of the first and the second information multiplexed by the mobile station from the reverse frame; and a second DEMUX for demultiplexing the multiplexed reception state indicating bits into the

reception state indicating bits of the first information and the reception state indicating bits of the second information.

In related art, Lin discloses reception states of first information (read as received frame erasure) received on a first traffic channel and second information (read as erasure EIB) received on a second traffic channel, wherein reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (figure 2; col. 3, line 20 to col. 4, line 27)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lin into the teachings of Li to determine if the forward traffic channel message should be resent.

Furthermore, in related art, Kwon discloses first and second demultiplexers. (col. 1, lines 41-51; col. 4, lines 7-23; col. 8, lines 45-52; and col. 9, lines 13-17 and 45-53)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Kwon into the teachings of Li and Lin to control power in a CDMA system which is capable of performing a power control operating in consideration of different environments.

Consider **claim 12**, and as **applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the first MUX allocates a first predetermined number of successive reception state indicating bits of the first information, each bit being allocated to a successive leading slot, and a second predetermined number of successive reception state indicating bits of the second information, each bit being allocated to a successive trailing slot, the

Art Unit: 2618

trailing slots following the leading slots for the first information. (Kwon: col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 13**, and as **applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first and second information are reception result indicator bits for power control on a frame basis. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 14**, and as **applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 15**, and as **applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first information are QIBs (Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 16**, and as **applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the

Art Unit: 2618

invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 18**, and as applied to **claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the multiplexed reception state indicating bits of the first information are arranged in consecutive leading slots of the reverse frame and the multiplexed reception state indicating bits of the second information are arranged in trailing consecutive slots following the leading slots. (Kwon: col. 7, lines 13 to 47; col. 12, lines 13-19, 57-65; and col. 13, lines 13-22; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 19**, and as applied to **claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first and the second information are reception result indicator bits for power control on a frame basis. (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 20**, and as applied to **claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reverse frame is a pilot channel frame. (Li: figure 3; col. 3, lines 11-65; Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 21**, and as applied to **claim 17 above**, Li, as modified by Lin and Kwon, discloses the claimed invention wherein the reception state indicating bits of the first information

Art Unit: 2618

are QIBs (Quality Indicator Bits) and the reception state indicating bits of the second information are EIBs (Erasure Indicator Bits). (Lin: figure 2; col. 3, line 20 to col. 4, line 27)

Consider **claim 22**, and as **applied to claim 11 above**, Li, as modified by Lin and Kwon, discloses the claimed invention except for wherein the reception state indicating bits of the first information and the reception state indicating bits of the second information are transmitted at a 50 bps data rate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bits transmitted at 50 bps for high rate power control, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the

Art Unit: 2618


Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092.

The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lana Le can be reached on (571) 272-7891. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.


Bobbak Safaipour
B.S./bs

August 29, 2007


8-30-07
LANA LE
PRIMARY EXAMINER